FIG. 1

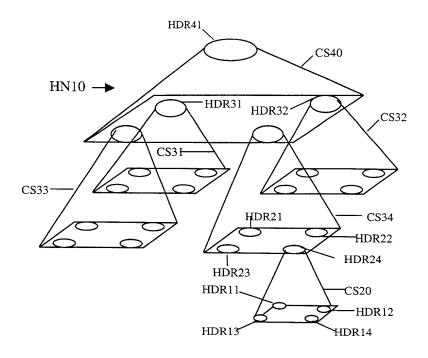


FIG. 2

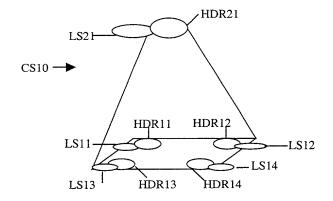


FIG. 3

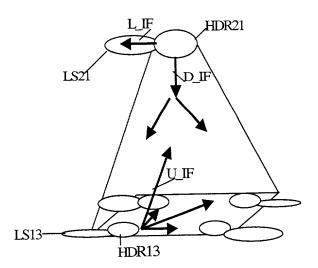


FIG. 4

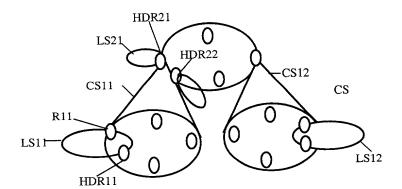


FIG. 5

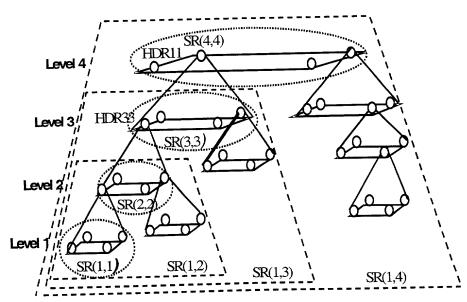
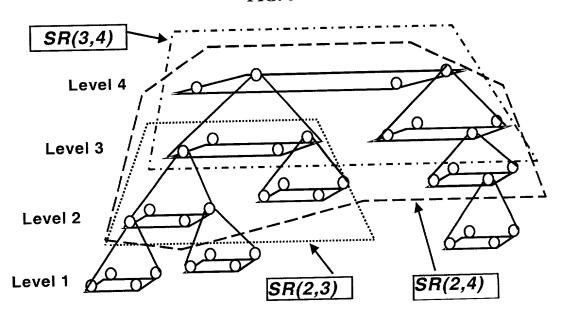


FIG. 6



**FIG.** 7

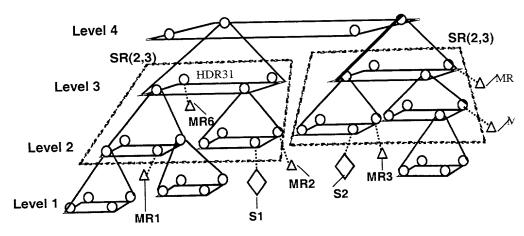
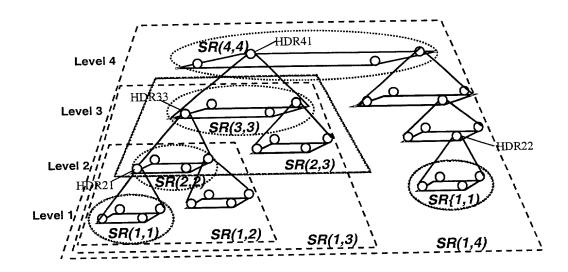
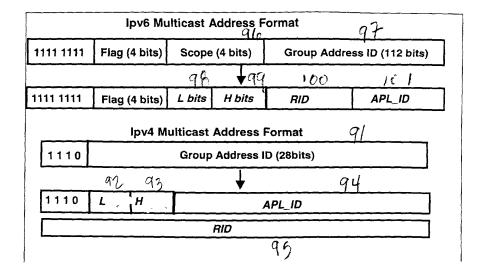


FIG 8





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Scope region of GA[SR(2,4),Null,aaa]

HO Q 41

Level 3

Level 3

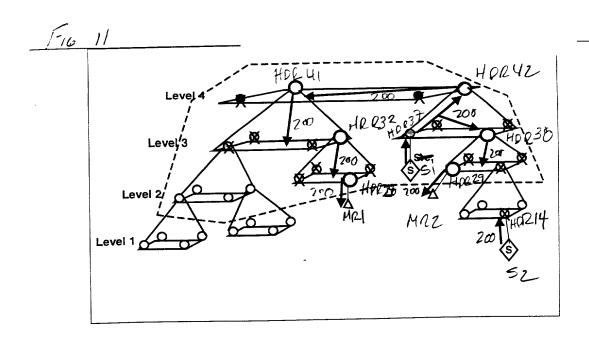
Level 2

Level 1

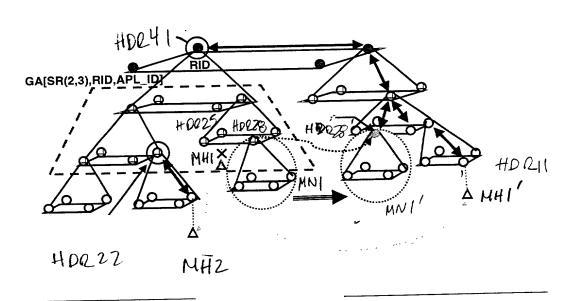
HO Q 28

HO Q 32

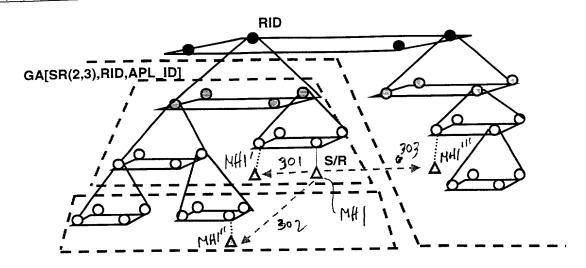
H



F16 12

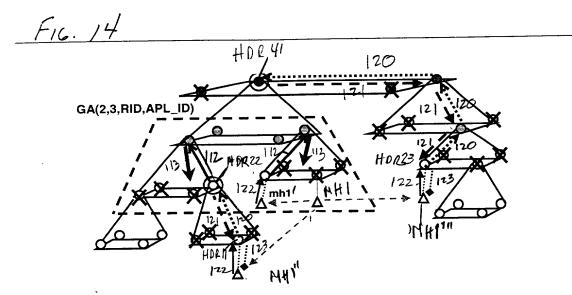


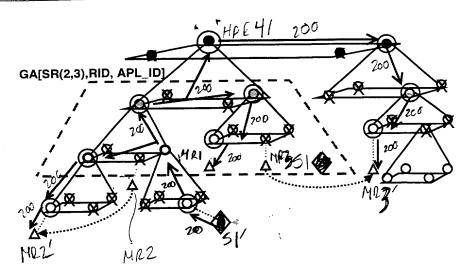
F14.13

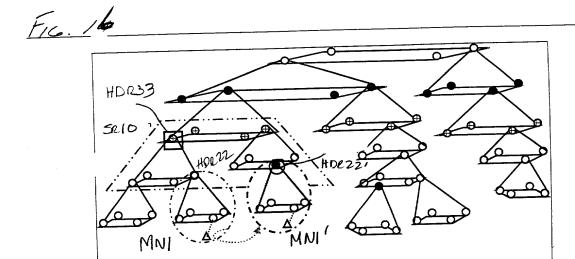


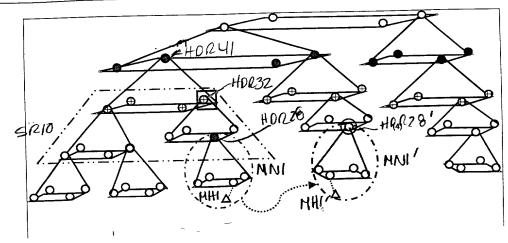
APP1313 Lee et al.

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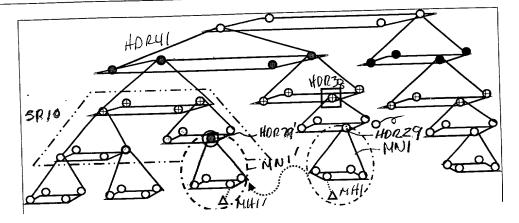








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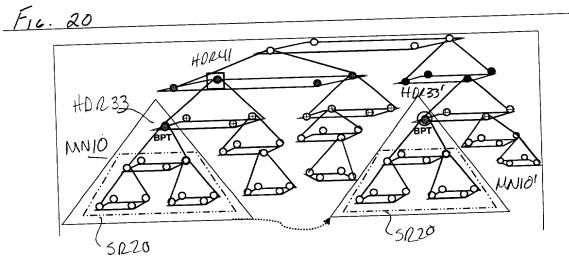


HDQ41

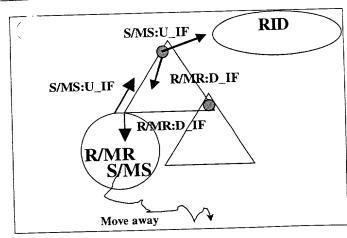
HDQ20

HD

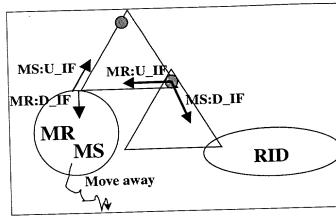
APP1313 Lee et al.



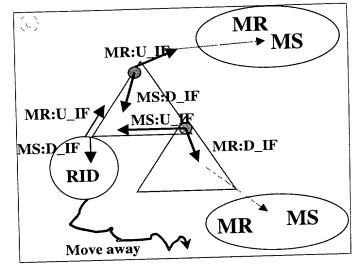
F16. 21 A

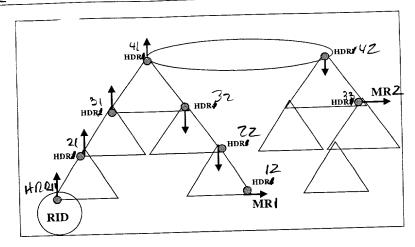


F16. 21 B



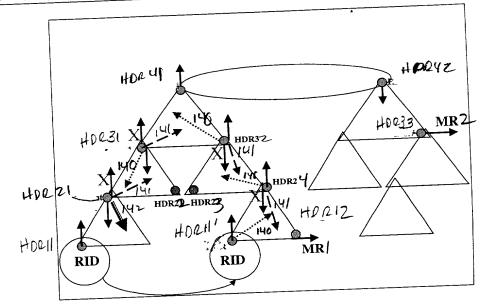
F16. 21C



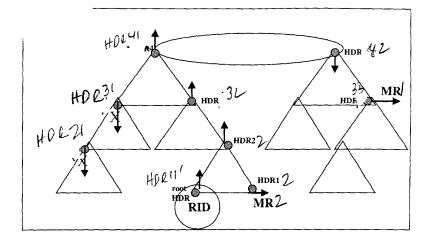


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F16.23

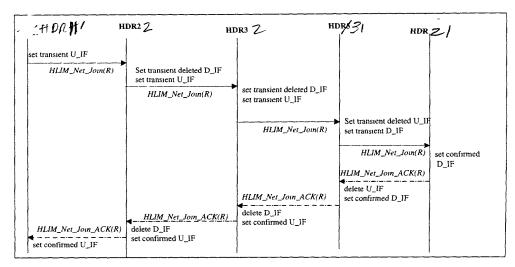


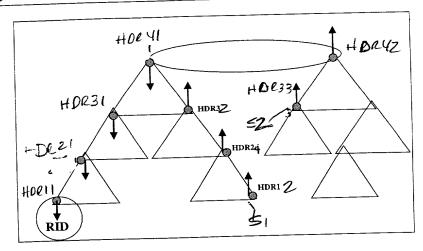
JII 11 5



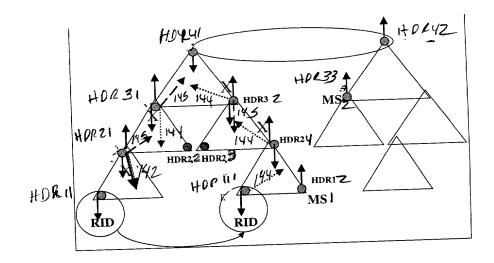
APP1313 Lee et al.

F14.25

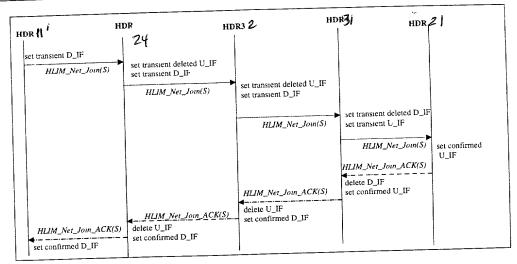




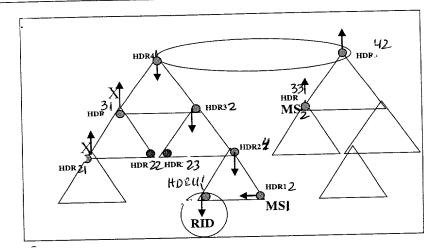
APP1313 Lee et al.



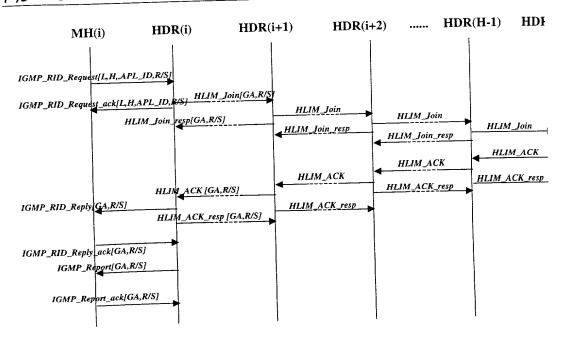




F16.29

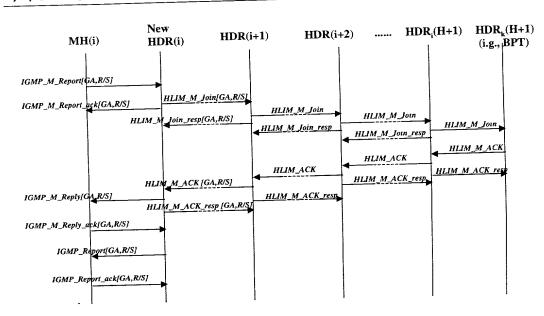


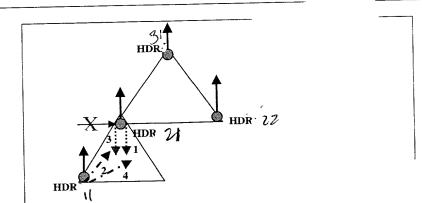
op re



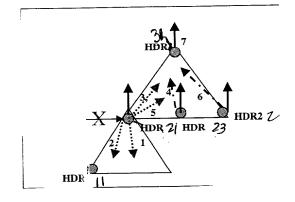
APP1313 Lee et al.

1111 11 1

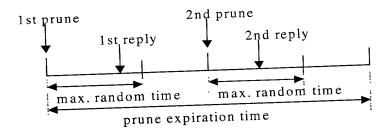


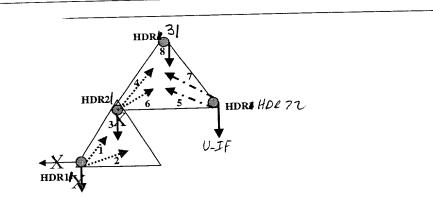


Fic. 33



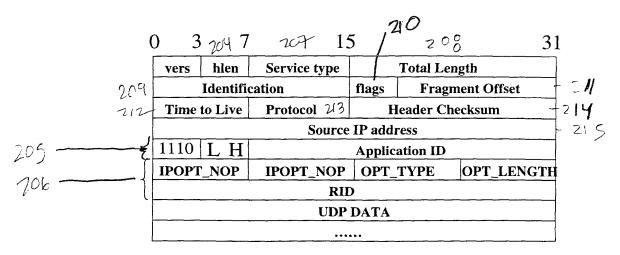
APP1313 Lee et al.





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C	201	3	20	02	7	203 <b>3</b>	! !
	1110		HSc	ope I	L	APL_ID	205
				•		RID	
1						204	

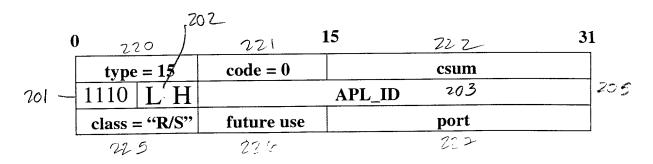


F16.38

220	221	222
type	Code / Max Resp Time	checksum

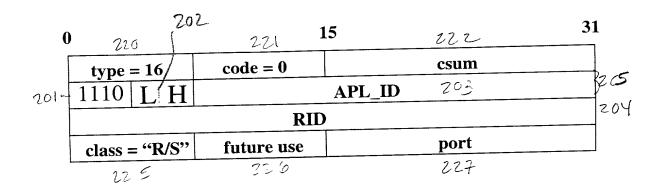
APP1313 Lee et al.

	204	207	213 1 1	<b>5</b> / 20	2 <i>0</i> 8	
vers	hlen	Servi	ce type		Total Length	
	Identific	fication		flags Fragment Off		
Time to Live= 1		Protocol = 2		Header Checksum		
Source			Source	e IP address		
Destination IP address = content specific to message type						



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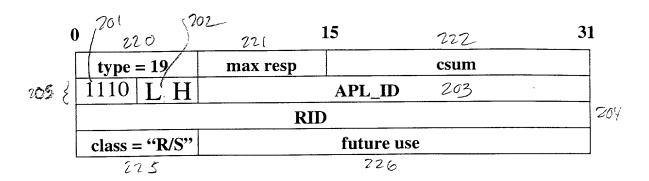
F16. 41



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F16. 42

0 220 22 15 272 31
type = 17 max resp csum



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F16. 44

0 220

221 1

15

222

31

type = 23 code = 0 csum

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F16. 45

0 270

221

15

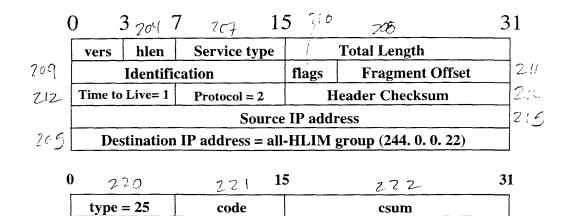
272

31

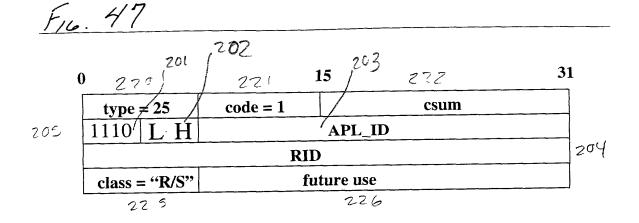
 type = 24
 code = 0
 csum

 old RID
 250

 new RID
 31



APP1313 Lee et al.



APP1313 Lee et al.

203 220 201 (202 221 15 31 272 code = 2csum type ≠ 'APL\_ID 205 201 RID 226 class = "R/S"225 future use **Route Info** 230

31 15 0 221 220 222 code = 3type = 25csum 231 HDR(N) 232 HDR(N-1)233 HDR(k+1)

> APP1313 Lee et al.

F16.50

0 220

15 221

222

31

code = 4type = 25csum

> APP1313 Lee et al.

F16. 51

(2 0

15

31

220	221	22 6
type = 25	code = 11	csum
preference	future	use
228	22	26

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F16. 52

220

15 221

222

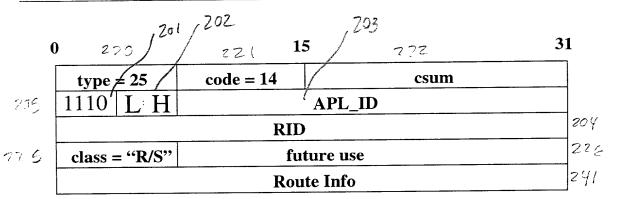
31

code = 12csum type = 25

	,	,202	203		
(		221	15 / 22	22	31
	type ≠ 25	<b>code</b> = 13		csum	
205	1110 <sup>/</sup> L H		APL_ID_		
		RI	D		204
225	class = "R/S"	f	uture use		27 (c)
	Old Parent HDR				
		R	oute Info		241

APP1313 Lee et al.

F16. 54



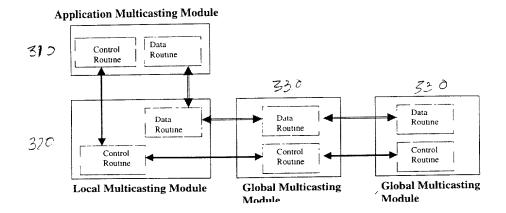
APP1313
Lee et al.

0	220	721 15	272	31			
	type = 25	code = 15	csum				
ľ	Old RID						
		New RII	)	243			

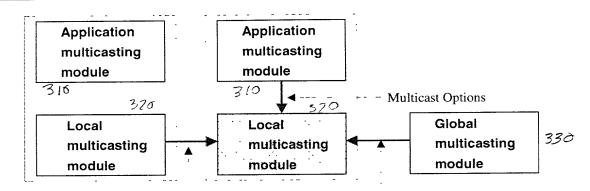
0 270 271 15 272 31 type = 25 code = 16 csum

APP1313 Lee et al.

F16.57 253 772 320 77. type = 25 code = 17Len\_S\_In Len\_R\_Out Len\_S\_Out Len\_R\_In HGA<sub>1</sub> APL\_ID RID Len\_R\_In 1110 APL ID RID APL\_ID 1110 RID Len\_S\_In APL ID RID APL\_ID 1110 Н RID Len\_R\_Out APL ID RID 1110 L H APL\_ID RID Н APL ID RID

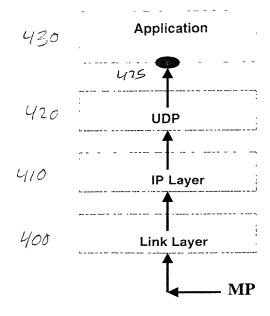


APP1313 Lee et al.



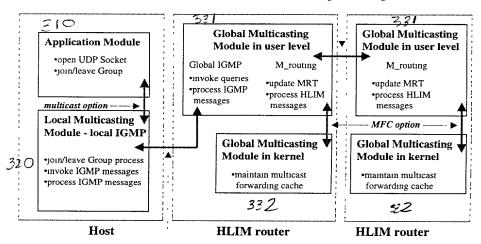
LMM IGMP messages

GMM IGMP messages

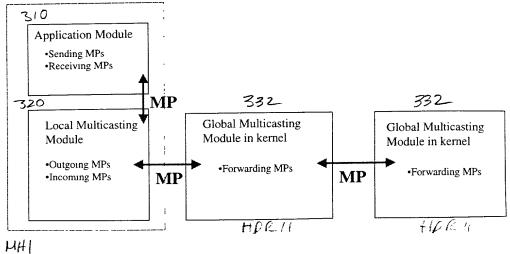


F16.61

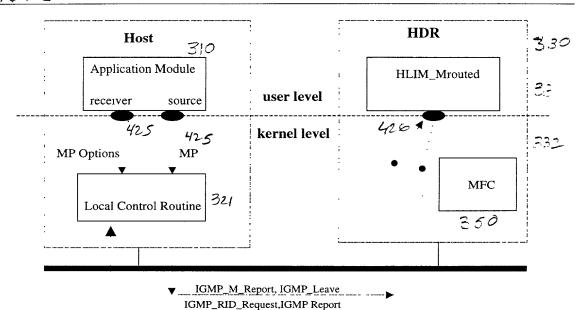
## HLIM global messages



**HLIM IGMP messages** 



F16.63



IGMP\_RID\_Reply, IGMP\_Query, IGMP\_Group\_Query, IGMP\_Hello, IGMP\_Flush

